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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/726,637	11/30/2000	Elizabeth Ann Beamon	36968/206897	2089

36192 7590 10/20/2005

CANTOR COLBURN LLP  
55 GRIFFIN ROAD SOUTH  
BLOOMFIELD, CT 06002

EXAMINER
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TIEU, BINH KIEN

ART UNIT	PAPER NUMBER
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2643

DATE MAILED: 10/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/726,637

Applicant(s)

BEAMON ET AL.

Examiner

BINH K. TIEU

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5,8,10-14 and 17-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5,8,10-14 and 17-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Double Patenting*

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-5, 8, 10-14, and 17-25 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-17 of U.S. Patent No.

**6,870,900**, claims 1-13 of U.S. Patent No. **6,771,739**, claims 1-15 of U.S. Patent No.

**6,788,765** and claims 1-12 of U.S. Patent No. **6,614,882**. Although the conflicting claims are

not identical, they are not patentably distinct from each other because they recited the same

claimed inventions of a method and a system for proactively maintaining a telephone system

local loop. The differences among them are "the status information including engineering

information relating to government regulations". However, these differences are only found in

the nonfunctional descriptive material and are not functionally involved in the steps recited. The

"communicating" through "updating" steps would be performed the same regardless of the type

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of incentives. Thus, this descriptive material will not distinguish the claimed invention from the prior art in terms of patentability, see *In re Gulack*, 703 F.2d 1381, 1385, 217 USPQ 401, 404 (Fed. Cir. 1983), *In re Lowry*, 32 F.3d 1579, 32 USPQ2d 1031 (Fed. Cir. 1994).

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1- 3, 5, 8, 10-14, 16, 18 and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kinser, Jr. et al. (US Pat. #: 5,790,633) in view of Kidder et al. (US Pat. #: 6,445,774 B1) (Kinser, Jr. and Kidder were cited in previous the Office Actions) and further in view of Sardana (US Pat. #: 6,298,352).

Regarding claims 1 and 18, Kinser teaches a method for proactively maintaining a telephone system local loop comprising communication with a communication network and acquiring status information with a digital loop carrier; predicting proactive maintenance based upon the status information in (see col. 24 line 29-column 15 line 22, col. 27, col. 30 line 46-col. 31 line 5, col.36 lines 4-12).

Furthermore, Kinser teaches generating work order information, dispatching and updating or closing tickets in (see col.18 lines 43-56, col.19 and col. 33). Kinser teaches status information which can include at least one of engineering information, customer information, maintenance information, service information and real-time information in (see col. 25 lines 5-9

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and lines 35-44) by receiving information including customer information, alarm associated with cable pressure systems and using information received LMOS (loop maintenance operations system) which supplies maintenance information which includes line records and identify network troubles.

Kinser fails to teach in detail entire automation of work force services.

Kidder teaches a system for automated workflow in a network management and operations system in (see disclosure) wherein workload can be dispatched to field technicians and updated based on status information in (see disclosure).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Kidder into that of Kinser thus making it possible to control trouble tickets or workload in an efficient manner.

The combination fails to teach that network service maintenance would be made to comply with government standards.

Sardana teaches an acceptable desired plan for changing the links of a telephone network to be developed by using knowledge based rules to generate an ideal plan which meets demand and modernization constrains wherein the engineering information, such as demand patterns, technology evolutions and changes, government regulations, etc., have to be considered (col.1, lines 22-31) for a purpose of improving the telecommunications network.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Sardana into that of the combination thus making it possible to provide uniformity among carriers and enhance customer satisfaction.

Regarding claim 2, see the explanation as set forth regarding claim 1.

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Regarding claim 3, the combination including Kinser teaches using a weighting factor (see column 44 lines 36-44).

Regarding claim 5, the combination including Kinser teaches the claimed subject matter comprising of loop facilities and control system (see column 7 line 40-column 8).

Regarding claim 8, the combination including Kinser et al. teaches using a predictor and also, being able to dispatch a workforce to handles faults in a geographical area (see column 36, column 46 lines 38-58, column 29 lines 54-column 30 line 17, column 54 lines 34-67).

Regarding claim 10, the combination including Kinser teaches updating the digital loop carrier with completed service order or completed fault repairs, see for instance (see column 47 lines 25-32). Furthermore, any commercially available database can be used for information regarding workload. The combination including Kinser teaches a loop maintenance operating system.

Regarding claims 11-12, the combination including Kinser teaches a loop maintenance operating system, which teaches the claimed subject matter in (see column 40 lines 23-66, column 24 lines 49-64).

Regarding claim 13, Kinser teaches communicating with a communicating network and acquiring at least one of customer information associated with copper line pairs, service information associated with copper line pairs and status information associated with a digital loop carrier', storing the acquired information, combining the stored information and predicting proactive maintenance based upon the combined information (see column 24 line 29-column 25 lines 15-22, column 27, column 30 line 46-column 31 line 5, column 36 lines 4-12, column 44

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lines 36-44)). Note that the amended limitation automatically@ stills reads on the functionalities of the predictor without taking into account the previous process which can be a manual process. Furthermore, according to Kinser, the intent of his invention is to reduce manual intervention and also, the sources which the predictor can analyze could be an automatic process including an automated line insulation test, messages from switching systems and alarms from pressure cables (see column 25 lines 11-22).

Kinser teaches status information which can include at least one of engineering information, customer information, maintenance information, service information and real-time information in (see col. 25 lines 5-9 and lines 35-44) by receiving information including customer information, alarm associated with cable pressure systems and using information received LMOS (loop maintenance operations system) which supplies maintenance information which includes line records and identify network troubles.

Kinser fails to teach in detail entire automation of work force services.

Kidder teaches a system for automated workflow in a network management and operations system in (see disclosure) wherein workload can be dispatched to field technicians and updated based on status information in (see disclosure).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Kidder into that of Kinser thus making it possible to control trouble tickets or workload in an efficient manner.

The combination fails to teach that network service maintenance would be made to comply with government standards.

Sardana teaches an acceptable desired plan for changing the links of a telephone network to be developed by using knowledge based rules to generate an ideal plan which meets demand and modernization constraints wherein the engineering information, such as demand patterns, technology evolutions and changes, government regulations, etc., have to be considered (col. 1, lines 22-31) for a purpose of improving the telecommunications network.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Sardana into that of the combination thus making it possible to provide uniformity among carriers and enhance customer satisfaction.

Regarding claim 14, see the explanation as set forth in the rejection of claim 13.

Regarding claim 16, the combination including Kinser teaches dispatching work order information describing the predicted proactive maintenance (see column 36, column 46 lines 38-58, column 29 lines M-column 30 line 17, column 54 lines 34-67).

Regarding claims 21-23, The combination including Kinser teaches engineering information which includes system performance data, customer information which includes customer information including customer profiles, including complaints/trouble and location to dispatch a workforce or technician to fix problem and maintenance information as derived from a loop maintenance operation system which provides information including line records and current network troubles in (see cols. 24-26).



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4. Claims 4, 17 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kinser et al. (US Pat# 5,790,633, cited by applicant) in view of Kidder and further in view of Kulatunge et al. (US Pat# 6,353,902 also cited in previous Office Action) and Sardana (US Pat. #: 5,067,148).

Regarding claim 17, Kinser teaches a system for proactively maintaining telephone network facilities in a PSTN (see figs. 21-26 and disclosure) comprising a loop facilities and control system (112, 136), digital loop carrier module communicating with a communication network and acquiring digital loop carrier information, a database stored in memory and a processor capable of processing information stored in the database and of generating proactive maintenance.

Kinser teaches status information which can include at least one of engineering information, customer information, maintenance information, service information and real-time information in (see col. 25 lines 5-9 and lines 35-44) by receiving information including customer information, alarm associated with cable pressure systems and using information received LMOS (loop maintenance operations system) which supplies maintenance information which includes line records and identify network troubles.

Kinser fails to teach in detail entire automation of work force services.

Kidder teaches a system for automated workflow in a network management and operations system in (see disclosure) wherein workload can be dispatched to field technicians and updated based on status information in (see disclosure).

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Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Kidder into that of Kinser thus making it possible to control trouble tickets or workload in an efficient manner.

The combination including Kinser fails to teach being able to dynamically predict or attend to problems or faults associating with a network.

Kulatunge et al. teaches a network fault prediction and proactive maintenance system wherein future occurrence of a fault is predicted based on an analysis of the valid log and the characteristics found in a database. Corrective measures are taken to prevent the fault from occurring (see column 3 lines 20-32, column 1 lines 10-12 and 207 of fig. 2).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Kulatunge into that of the combination including Kinser thus making it possible to predict future possible errors and taken corrective measures.

The combination fails to teach that network service maintenance would be made to comply with government standards.

Sardana teaches an acceptable desired plan for changing the links of a telephone network to be developed by using knowledge based rules to generate an ideal plan which meets demand and modernization constrains wherein the engineering information, such as demand patterns, technology evolutions and changes, government regulations, etc., have to be considered (col.1, lines 22-31) for a purpose of improving the telecommunications network.

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Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Sardana into that of the combination thus making it possible to provide uniformity among carriers and enhance customer satisfaction.

Regarding claims 4 and 19-20, see the explanation as set forth in the rejection of claim 18.

5. Claims 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kinser, Jr. et al. (US Pat# 5,790,633) in view of Kidder et al. (US Pat# 6,445,774 B1) and further in view of Sardana (US Pat. #: 5,067,148) and Frigo (US Pat. #: 5,710,648) or Prohaska (US Pat. #: 6,208,776) (Frigo and Prohaska were also cited in the previous Office Action).

Regarding claims 24-25, the Kinser teaches monitoring of fiber optic cable pressure systems (see col. 25) and doesn't teach monitoring changes in the pressure, temperature data and flow information. Generating alarms from cable pressure systems inherently implies taken into account pressure variations.

For the sake of argument, Frigo teaches an optical communication system and sensor system wherein changes in temperature, pressure, attenuation of signals and so forth can be detected and monitored in (see col. 4 lines 48-57, col. 8 lines 7-12, col. 5 lines 34-40).

Prohaska et al. teaches a fiber optic sensor and detection system wherein a plurality of sensors can be used in detecting fluid flow pressure, temperature, intensity and so forth in (see col. 3 lines 2-4, col. 5 lines 10-16, fig. 3, col. 6 lines 34-52).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of either (Frigo or Prohaska) which takes a limitation quite similar to that of Kinser in details thus making it possible to detect characteristics

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associated with a fiber optical cable which according to Kinser can be used in providing proactive maintenance.

***Response to Arguments***

6. Applicant's arguments, see remarks, filed 03/02/2005, with respect to the rejection(s) of claim(s) 1-5, 8, 10-14 and 17-25 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Sardana (US Pat. #: 5,067,148).

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Binh K. Tieu whose telephone number is (571) 272-7510 and E-mail address: [BINH.TIEU@USPTO.GOV](mailto:BINH.TIEU@USPTO.GOV).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Curtis Kuntz, can be reached on (571) 272-7499 and **IF PAPER HAS BEEN MISSED FROM THIS OFFICIAL ACTION PACKAGE, PLEASE CALL Customer Service at (703) 306-0377 FOR THE SUBSTITUTIONS OR COPIES.**

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A handwritten signature in black ink, appearing to read "Binh Tieu", with a long horizontal flourish extending to the right.

**BINH TIEU**  
**PRIMARY EXAMINER**

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Date: October 17, 2005